



## **GENERAL COMMENTS**

Students generally performed well on the 2011 Geography examination. Most students used their time effectively, and many used the extra space provided at the back of the question book. The majority of students understood the directives 'discuss', 'evaluate', 'outline', 'compare' and 'describe', and most were able to complete the paper.

The first time students refer to an organisation such as the United Nations (UN) they should write it out in full, placing the acronym in brackets after the full version. In subsequent uses students can then use the acronym alone. Students need to define any acronyms they use, especially in the global phenomenon section.

### **Areas of strength and weakness**

#### **Strengths**

- Students generally made good use of examples and quantitative data to support their contentions.
- Local fieldwork provided the background for some very good mapping.
- Many students wrote extensively and gave correct and relevant information.
- Many students displayed an in-depth understanding of the topics studied and their case studies. There was a good understanding of sustainability.
- The most successful responses made excellent use of data to support their points.
- A wide variety of subregions was chosen by students when answering Question 1, and the more successful responses included elaboration on and discussion of the effectiveness of policies.
- There were many high-quality answers, especially for Question 3. The more successful students were able to interpret the graph quite well.
- Stronger students highlighted or underlined the key terms in the questions to ensure that all aspects were addressed adequately in their responses.

#### **Weaknesses**

- A large number of students seemed determined to write everything they knew instead of answering the question asked.
- Many students used and referred to data that was out of date (for example, the Bracks and Howard governments), confused data from different case studies and/or made too many errors.
- Questions that required an evaluation were often answered poorly. In many instances students gave detailed explanations without any evaluation.
- Many students did not focus on the key words in the questions; for example, key terms or geospatial concepts. Although some students wrote very long responses and produced excellent data, many students could not be awarded full marks because they did not address the question; for example, instead of evaluating the 'sustainability of the policy', they discussed 'environmental sustainability' in general.
- Some students wrote too generally, with no supporting data or elaboration. General comments such as 'lack of flows stresses the river' or 'stresses the red gums' or 'animal life', or 'the scale of the resource is big' were common among weaker answers.
- Many students did not notice that some questions were linked and that the focus of the question had changed in particular question parts. Students are advised against preparing rote-learned responses.
- Students did not seem to have prepared broadly when studying the Murray-Darling Basin and only focused on one or two small subregions in their case studies.
- Many students didn't demonstrate up-to-date knowledge of the Murray-Darling Basin (MDB). For example, too many students were not aware of the substantial rainfall that has occurred across the MDB and that the Coorong and Lower Lakes are no longer under threat. Some students did not seem aware that the North-South pipeline had been completed, while others thought it was 'stealing' the water from the MDB. A generally poor understanding was evident with regard to the building of barrages over the Murray Mouth. Many students were confused about whether the water from the sea was being stopped or whether the river water was being stopped from mixing with sea water, although most knew that the water was six times saltier in this region. The work of the barrages was confused by these students.
- Only a small proportion of students were able to correctly locate all required place locations within the Murray-Darling Basin. Students also experienced difficulties locating places accurately on the world map.
- The depth of detail when using case studies of water management in the MDB was good; however, more preparation is required as many students wrote superficial responses and used broad, rather than specific, examples and case studies. Students need to know the names and details of specific groups, places and events.



Although many students were generally unable to describe specific features of the workings of water management policies, the assessment of their overall effectiveness was done quite well.

- Many weaker students who chose to discuss the North-South pipeline expressed personal views rather than discussing the rationale behind the policy/the pipeline.
- The answers to Unit 3 questions appeared to be much weaker than the answers for the Unit 4 sections.
- There was some confusion in regard to climate change and the ozone hole – quite a few students thought the ozone hole was caused by CO<sub>2</sub> emissions, or that Australia’s carbon tax was working to cool the Earth. Again, teachers need to ensure that students do not confuse these two issues, this is only possible if students have a thorough understanding of the issues and the case studies they have learnt.
- Many students did not annotate the map of their local fieldwork resource to show an understanding of spatial interaction but simply drew arrows that depicted movement. Overall, students did not seem to understand what spatial interaction is. When annotating an example of spatial interaction on their map, many students could identify the two (or more) features/elements that were interacting but had difficulty in summarising how that interaction was occurring and/or the consequence of that interaction. Many students appeared not to understand the term ‘annotation’. Many students wrote about the concept of spatial association.
- Students need to read questions carefully. In Question 2, some students compared the embroidery factory and their resources rather than discussing the scale of the resources and, likewise, wrote on ‘changes 1950–2050’ or described ‘total world population’, rather than ‘population growth’ in Question 3.
- A minority of students were challenged by the data on the graph in Question 3. They confused the variables and could not read the graph. This is a concern for Geography students at this level.
- Although there were some excellent maps displaying a range of global phenomena, in general the quality of mapping was low. The phenomenon was incorrectly mapped, carelessly represented and well below the expected standard.
- Some students answered Question 3e. with regard to sustainability, affordability, fairness, flexibility, effectiveness, enforceability, incentives and time frame, categories that seemed to muddle their answers to the question.

## SPECIFIC INFORMATION

### Question 1

On the whole this question was poorly completed and very few students obtained full marks. This type of question has been on the paper more than once in recent years, and the locations featured this year were critical to a proper understanding of the water in the Murray-Darling Basin. Students should be prepared to identify key locations as well as case study locations on a map of the MDB or to map locations/distributions.

#### Question 1ai–iv.

Marks	0	1	2	3	4	Average
%	17	27	26	21	10	1.8

- The Ramsar Wetlands of the Hattah-Kulkyne Lakes – F
- Point where water is diverted for use outside of the Basin – E
- Dartmouth irrigation storage facility – H
- St George/Cubbie Station – B

#### Question 1bi–ii.

Marks	0	1	2	Average
%	9	32	58	1.5

The most successful students chose their characteristic correctly and then explained why their chosen characteristic made the area suitable for irrigation farming. Although these questions were generally answered well, a surprising number of students failed to answer these questions correctly. Human and natural resources are basic terms and their definitions should be ingrained in every student’s memory. The most common error was to identify a human resource (for example, the channels) as a natural resource. Students who scored poorly often did not read the question fully, ignored the words ‘suitable for irrigation farming’ or gave natural and human characteristics that were not relevant to irrigation farming.

Following are examples of successful responses.

*The lie of the land at Barren box storage is flat, making it easy to construct canals and irrigation channels for irrigation.*

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*The active storage cell holds 24500 million litres, a large water source that is intended for irrigation farming.*

## Question 1c.

Marks	0	1	Average
%	64	36	0.4

This question was not well answered. Successful answers correctly identified that the rainfall pattern is variable and then explained how this justified the development of the Barren Box Storage and Wetland in order to store water in high rainfall years to use in years of low rainfall.

Cause and effect were often totally misplaced here. Many students seemed to attribute the increasing rainfall to the water storage. Many students did not demonstrate a basic knowledge of what constitutes high, medium and low rainfall in relation to agriculture in the MDB. Some students wrote very lengthy answers that contained a general discussion but failed to mention that the rainfall was highly variable. Some argued that it was the Barren Box Storage and Wetland that influenced the amount of rainfall in any one year. Some students missed the point of the question altogether.

Following are examples of successful responses.

*The rainfall pattern fluctuates therefore the Barren Box Storage and Wetland development is needed to ensure water availability.*

*Griffith has incredibly irregular annual rainfall, varying between less than 150mm in 2006 and 600mm in 2010. The Barren Box Storage and Wetland area regulates water supplies and supplies water to farming operations year by year, regardless of weather.*

## Question 1d.

Marks	0	1	2	3	4	Average
%	13	17	26	24	19	2.2

The more successful students nominated a specific location and named a policy in operation in that region. They then named and comprehensively described the policy in their chosen subregion. They discussed how the policy managed or could manage water resources and finally discussed how effective this management was/is/will be.

The most successful students provided relevant facts and figures about the policy but also gave succinct details about the nature of the subregion they had selected.

The less successful responses referred in general terms to improving irrigation schemes or buying back water allocation rights throughout the MDB. These students also changed the subject matter of their answer; for example, nominating the policy of improving irrigation systems and then going on to discuss water allocations. Some students did not name a location or ignored it in their answers.

There were some problems with identifying subregions; the Murray Channel, the entire Murray-Darling Basin and Northern Victoria are not subregions. Some students named a subregion of the Goulburn Valley and then talked about Cubbie Station, so they had not really connected with the question. Often the discussion was very general and did not refer to the subregion at all. Overall, this question was not well done as there was little discussion of the effectiveness of the policy in managing water resources. Weaker students didn't describe the policy or strategies linked to the policy and offered sweeping statements about how effective it would be. Generally they didn't consider the negative aspects of the policy.

All of the possible policies suggested were used by students, although the cultural sites and the building structures were the least popular. The biggest fault in the answers to this question was a failure to say anything site-specific or action-oriented. Too many weak answers simply agreed that these policies were good ideas but did not apply them to a particular area, gave none of the detail expected and did not name a specific policy. Many students were reluctant to make critical assessments of policies that were not working; if they were all working, why is there so much discussion about water in the MDB?

Strong answers for irrigation improvement detailed the irrigation systems in the Goulburn Valley and the Riverina, etc. as a context. Successful answers for environmental flows and diversity of plants and animals gave the location and specific species of plants, fish and birds that were to be preserved. They included dates and the organisations involved.

Following are examples of successful responses.



*Subregion: Shepparton Irrigation Region (SIR)*

*Policy: Improving efficiency of irrigation systems*

*The Shepparton Irrigation Region is the highest value producer of the MDB, producing \$1.7 bill gross a year of agricultural products. The region is heavily irrigated with 317,000 ha of 500,000 ha irrigated. Therefore the irrigation systems must improve in efficiency of water use which is being done by the Northern Victorian Irrigation Renewal Project (NVIRP). This involves a \$2 bill upgrade and modernisation of the irrigation system, involving 2700 flume gates, 5900 irrigation meters and 3000 farm meters which aim to save 925 GL a year of water. This is done largely by back hoeing the irrigation channels making water use and irrigation channels more efficient and effective. If channels aren't back hoed, around 45% of the water in them is lost, thus making the NVIRP very effective at managing the improvement of efficiency of water use.*

*Subregion: Barmah-Millewa Forest*

*Policy: Ensuring environmental flows to maintain wetlands*

*Living Murray Initiative*

*This policy would be effective in managing water resources for the Barmah-Millewa forest, as water is critical for the eco-systems survival. This sub-region is 70,000 ha and contains the largest forest of Red River Gums. These trees are reliant on seasonal floods in spring and in winter, yet have become stressed due to water storages being built upstream such as the Hume Dam, preventing this natural process from happening. Due to this wetland being protected at a global scale as a RAMSAR wetland, the Murray Darling Ministerial Council selected it as a part of the 2003 living Murray initiative, which provides natural environmental flows at correct time to the 6 major wetlands in the MDB. This will work as it preserves this water resource, ensuring that it remains healthy, demonstrated by the first flow in 2005 which saw an 'improvement in aquatic life'. Hence this policy does effectively and sustainably manage this water resource.*

*Subregion: The Coorong, lower Lakes and the Mouth of the Murray*

*Policy: Building Structures on water courses*

*The construction of barrages at Goolwa, located within the sub region, the lower Murray manages water resources as it prevents salty water from the Coorong, mixing with the lower lakes, providing suitable water for irrigation and human use. The construction of the barrages, is ineffective however, as the Coorong is now five to six times saltier than the Sea. As water from the Coorong has not been able to flow into the lower lakes, water levels of Lake Albert and Lake Alexandria have dropped to 0.6 metres below sea level. This has resulted in soil being exposed to air, and has damaged the area harming wild life. So while the policy has been effective in providing water for irrigation, the policy has harmed wildlife, the health of the Coorong as well as the lower lakes.*

*Subregion: The Riverine Plains*

*Policy: Improving efficiency of irrigation systems*

*For farmers in locations such as Barham and Wakool that have adopted the new and more water efficient irrigation systems such as under tree drippers and sprays their farmers have experienced the benefits. For a local farmer at Barham ... whom we visited on a fieldtrip in February, the adoption of these new methods have helped her better her farms condition by lowering the water table and reducing the amount of water she used to sustain her farm. [The farmer] lost 20,000 acres to salinity problems when using the old methods such as over tree sprays, furrow irrigation and flood irrigation with her change her irrigation methods and the use of the computer program 'Enrirosoan' [the farmer] has salvaged some her lost land as well as saved money on buying water. This shows that more efficient irrigation methods are effective in managing the water resources in the Riverine Plains region of the MDB.*

**Question 1ei.**

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>Average</b>
<b>%</b>	20	26	54	<b>1.4</b>

Understanding of who the stakeholders are and what the conflict is has improved from previous years; however, this question was still poorly done by many students. Some used information that was very out of date; for example, quoting old data from the Murray-Darling Basin Commission. Some failed to discuss a conflict over water use, discussing instead how to reverse a negative environmental impact at, for example, the Coorong, rather than identifying a conflict between two or more parties over water use. Salinity is not a conflict in itself; the conflict with salinity could be how to best tackle the problem, but this was often not covered.

**Question 1eii.**

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>Average</b>
<b>%</b>	18	34	48	<b>1.3</b>



This question was reasonably well done, although some students nominated a policy that did not apply to the conflict nominated in the first part of the question. A common error was to name the policy and not describe or elaborate on it.

**Question 1eiii.**

Marks	0	1	2	3	4	Average
%	15	18	27	24	16	<b>1.3</b>

Again, many students were reluctant to make critical assessments of policies that were not working and, in this case, not sustainable. There was confusion in many answers between sustainability and effectiveness – a conflict could be resolved by a particular solution but this does not mean it is sustainable. Students who relied on acronyms to prompt their answers here often wrote a lot that was not relevant.

The most common error was not dealing with the sustainability of the policy into the future. Most students discussed sustainability but not the future.

Following are examples of successful responses to Question 1e.

**Macquarie Marshes**

*i. In the Macquarie Marshes region, there is massive debate about the allocation of water between the Macquarie Marshes Wetland Committee and the Cotton Growers Association. The cotton growers want more rights to water so they can increase their crops and profits, while the Macquarie Marshes Wetland Committee want more environmental flows to preserve the spectacular region for future generations.*

*ii. The NSW Wetland Recovery Program has been introduced. This program involves careful and fair allocation of water to both parties. By allocating enough water to maintain and increase profits made by the cotton growers and also maintain the health of the marshes, both parties will be able to agree and conflict stopped or reduced.*

*iii. The NSW Wetland Recovery Program will not be very sustainable in the future. This is because the Macquarie Marshes need an extensive amount of water to be sustained into the future. Without an extreme quantity of water, flora and fauna will begin to disappear. Also as the Cotton growers in this region already produce 50% of Australia's cotton, they will eventually need water to increase productivity. The wants of both parties will result in the conflict arising once again, thus making this program not very sustainable in the future.*

**Lake Victoria**

*i. In Lake Victoria conflict arose following the water level of the lake being lowered to fix a seepage issue in 1994, as it revealed Aboriginal graves of the Barkindji people. Conflict arose between South Australian Water as they wanted the lake to be refilled as it provides 90% of its water to Adelaide residents, also to farmers as they need water for their sheep. The Barkindji people wanted the water level in the lake to be lowered to protect the graves of their ancestors.*

*ii. The Lake Victoria Advisory Committee developed a management policy that satisfied the wants of all those parties. The lake was filled to 2.3 metres below its full capacity, ensuring a sustainable water source for SA Water. Local farmers were provided with permanent drinking troughs so livestock did not need to walk to the lake as water was piped. Aboriginal graves were covered in geo-textiles and then sandbagged. Their distribution was also mapped.*

*iii. This policy is likely to be sustainable into the future. This policy currently meets the needs of Adelaide residents, as a sustainable water supply is still given to them even with the lake's water level being slightly lowered and does not compromise the ability of future South Australians to use the lake as a water resource. The Barkindji peoples' heritage is preserved and this policy does not compromise the ability of the future Barkindji generations to learn about their heritage and culture. Local farmers are still able to provide their sheep with a water source without compromising the ability of future Lake Victoria farmers to continue farming livestock.*

**Question 2**

The majority of students identified a local resource that they had visited in the field. A handful identified either cotton or water in very general terms. Local resources visited included Mt Stirling, Lake Neangar near Eaglehawk, Mornington's Main Street, Barwon River, Docklands, Canning Street Reserve, Queen Victoria Market, Point Nepean National Park, Royal Botanic Gardens, Windmill Reserve, Geelong, Tara Bulga National Park, Wattle Park, Eltham Lower Park, Willsmere Park, Port Campbell National Park and Phillip Island.

**Question 2ai–iii.**

Marks	0	1	2	3	Average
%	6	9	35	51	2.3

Students in most cases described their local resource using the characteristics of location within its region, distance and region. Both distance (part ii.) and region (part iii.) were answered consistently well; however, quite a number of students were not able to describe the location of their local resource (part i.) correctly. Students who chose to use



'relative' location in many circumstances only referred to the distance the resource was from something else and did not mention in which direction it was located. Students who chose to use 'absolute' location in many circumstances mentioned the resource's street address; however, did not mention in which town or suburb it was located.

Following are examples of successful responses.

## 2ai. Location within its region

*The Penguin Parade is located in the south west coast of Phillip Island on the Summerlands Peninsula in Western Port Bay.*

*Como Estate is located on Lechlade Avenue within the suburb of South Yarra. It lies south of the Yarra River, also within this region.*

*The Barwon River is located in Victoria and runs through the city of Geelong. It is situated between Newton, Belmont and Highton and is 75km SW of Melbourne.*

## 2aii. Distance

*The Penguin Parade – It is located 130 km from Melbourne, and approximately 5 km from the main town on the island, Cowes.*

*The Melbourne Royal Botanic Gardens is located approximately 1.5 km away from the CBD. The resource (Chapel St) where we have collected data is an 800m long shopping strip precinct.*

*Lilydale Lake Reserve is about 40 kms north-east of Melbourne, situated in the east of the suburb of Lilydale, and is about a 5 minute drive from Lilydale town centre.*

## 2aiii. Region

*The Penguin Parade is within the Phillip Island Nature Park which covers 20% of Phillip Island.*

*Como Estate is located within the region of Stonington City Council, in the South- Eastern region of Melbourne's inner suburbs.*

*Chapel Street is located within the City of Stonington, situated in the State of Victoria.*

## Question 2b.

Marks	0	1	2	Average
%	29	24	47	1.2

Most students clearly showed how their local resource was either similar or different to the embroidery factory in Delhi, India. However, many students did not read the question carefully, and too many answers provided a comparison of the function or the location of both local resources. These responses did not refer to similarities or differences in regards to scale, but merely described how the resources were different (that is, in their characteristics). Almost all students who did refer to scale were also able to quantify their answer.

Following are examples of successful responses.

*Fawkner Park is a large recreational area compared to the relatively small resource of the embroidery factory. Whereas the factory is 5m × 6m and inside a four story building, Fawkner Park measures approximately 1km across its longest diagonal. Furthermore, the factory is located away from the main road (200m) but Fawkner Park is adjacent to three major roads.*

*The embroidery factory is measured as 5m × 6m, located on the ground floor of a 4 story building. The factory is also present within the city of Delhi. The factory compared to Toolangi is on a smaller scale with Toolangi covering an area of 35000 hectares.*

*The scale of my local resource is bigger and covers a wide region of 2 suburbs. Where the factory only covers 5 × 6 m.*

*The scale of Emerald Lake Park varies greatly from the embroidery factory in Delhi as ELP is 50 hectares in diameter where the embroidery factory is only 5m by 6m. Emerald Lake Park scale is much bigger.*

## Question 2c.

Marks	0	1	2	Average
%	41	32	27	0.9

Generally the sketches provided were clear and easy to understand. However, too few were annotated to show an example of spatial interaction. A large proportion of students demonstrated an understanding of movement rather than



spatial interaction. Some of these sketches used arrows to show movement; however, they failed to describe what movements and resulting interactions were taking place. If the interaction between two phenomena or places was shown, many failed to indicate the consequence or degree, which is an aspect of spatial interaction.

Some students who annotated their sketch referred to a 'spatial association' not a 'spatial interaction'.

### Question 2d.

Marks	0	1	2	3	Average
%	15	18	35	31	<b>1.8</b>

Many students described an example of 'spatial interaction' that occurred at their local resource. They were also able to identify if it had a positive or negative impact. However, many students failed to comment on how this impacted on either the environment or people. The more successful responses referred to both their map and the spatial interaction they mapped. Most students wrote about the spatial interaction occurring within the local fieldwork resource, clearly explained whether the impact was positive or negative and indicated how the impact affected the local resource. Most of the successful answers included a measure of the degree of impact and highlighted the effects, especially the effects on the environment.

The less successful responses often indicated an understanding of spatial interaction but failed to refer to their map, or the map was poorly annotated, which hindered their ability to write about the impact on the local fieldwork resource.

Following are examples of successful responses.

*The interaction between the Estate's gardens and the visitors has resulted in a negative impact on the human planted and maintained, introduced species. The concentration of human traffic to the allocated paths (made from historically accurate stone) has caused the erosion of both the paths and the nearby garden beds. This means the National Trust must research and build new paths and fix gardens in a costly and historically accurate manner.*

*The spatial interaction between people using the shops and visiting the beach has a negative impact on the environment. It was observed that 40% of shoppers used 'unofficial' paths to the beach. This caused environmental degradation through dune erosion, the destruction of grasslands (habitat of endangered hooded plover) as well as the movement of dirt onto the beach. Shoppers who make their own path to the beach cause this environmental destruction. Therefore the strong spatial interaction of 98% of shoppers visiting the beach has a negative impact on the environment.*

### Question 3

#### Question 3ai–ii.

Marks	0	1	2	Average
%	18	19	62	<b>1.5</b>

Questions 3ai. and 3aii. were handled very well by the majority of students. Most students were able to clearly identify the year as 1990 and the addition as 85–88 million.

#### Question 3b.

Marks	0	1	2	3	Average
%	10	17	33	39	<b>2</b>

Most students were able to describe the decrease, the change in rate and give some quantification. Some students had difficulty distinguishing the charted variable asked for in this question. Two variables were charted, but some students described the 'population added' bars instead of the 'annual growth rate' line graph.

The more successful responses described the overall trend of the growth rate as one of 'decline'; they were then able to break up the trend into periods of slow decline and periods of rapid decline. The stronger answers also quantified their responses with the percentage of annual growth rate. The more successful answers indicated that the figures for 2010 onwards were predictions of future growth.

The less successful responses failed to either quantify their answer or pick up on the changes in the declining trend over the 80 years. Some other less successful responses also discussed the trends prior to 1970. The less successful students either didn't include the slow rate of decline between 1970 and 1990 or found it difficult to use appropriate descriptions. Some students correctly described the trend but did not supplement their observations with quantification.

Following are examples of successful responses.

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*The trend in the average annual growth rate for the world population between 1970 and 2050 is one of decline. In 1970 the average annual growth rate is 2.1% this decreases steadily to 1.7% by 1990. After 1990 the decline is rapid as it is predicted to reach 0.5% by 2050.*

*Since the 1970's the average annual growth rate has been declining and is predicted to continue the trend. Between 1970 and 1990 was the period of slowest decline (from 2.1% to 1.7%) and from 1990 to 2005 was the period of fastest delineation from 1.7% to 1.1%*

*Since 1970 the annual growth rate has seen a significant change over time dropping well over half from just over 2.0% in 1970 right down to almost a predicted 0.5% in 2050. The rate at which it was dropping came close to evening out between 1985 and 1990 but then continued on a steady decline from 1990 to 2050.*

### Question 3c.

Marks	0	1	2	3	Average
%	2	15	34	48	2.3

This question was generally well answered. Students were able to identify the general trend or pattern for each region (Africa and Europe) and observe that the populations of most African countries were predicted to increase while, in contrast, European populations were tending to decrease in size. Most students also gave examples of countries that either supported this pattern or were exceptions to the pattern. Some added quantifications to lend support to the observed pattern and identified a country that proved to be an exception to the general trend for that region.

Madagascar, Congo and even Burkina Faso were examples of African countries where the population was predicted to increase; exceptions were South Africa and Botswana. Weaker students referred simply to southern Africa. Exceptions in Europe were less well-identified by weaker students, who referred to Western Europe rather than France and the UK.

It should be noted that there remains a degree of misunderstanding of Africa, with a few students referring to 'the country of Africa' instead of acknowledging that it consists of many (53) countries. This confusion was evident when a student referred to a political factor causing the increasing growth trend of Africa as the government wanted more workers (and jobs) to improve the economy.

Following are examples of successful responses.

*Between 2003 and 2005 the population of Africa is said to grow with the population in some areas tripling e.g. Central Africa. In Africa, South Africa is to experience a decline in population, unlike the majority of African countries. In Europe, over the same time frame the population will decline, the exception being France and the UK where the population will grow but not double.*

*The projected population changes for Africa and Europe are quite different with Africa expected to increase and Europe expected to decrease in population between 2002 and 2050. In Africa 7 countries are expected to more than triple including Chad and Burkina Faso. The exception to this is the country of South Africa which is expected to decline in population. In Europe the majority of countries will experience decline except for some Western European countries like France and the United Kingdom where populations are still expected to grow.*

### Question 3d.

Marks	0	1	2	Average
%	14	26	60	1.5

Some reference was made to the demographic transition, which was linked to reasons for the differences in birth rates. This was a question where students weren't able to extract information from the data provided and relate it back to their learning; they had to know the facts.

Students were required to identify one factor and explain how it contributes to increasing or decreasing population growth. Some of the more popular factors used for Africa included lack of education, lack of contraception, high fertility rates and reduced mortality rates. Some of the more popular responses for Europe were ageing population, reduced fertility rates and women in education.

Following are examples of successful responses.

*One reason for Europe's declining population would be that most countries have a rapidly ageing population which leads to a higher death rate, lower birthrate, and ageing workforce and more dependents.*





*One factor that explains projected population growth in Europe is the changing role of women in society. In many European countries women are being educated much more and therefore seeking and placing university, jobs and careers ahead of having children and families.*

*The majority of Europe has good access to contraception and family planning, and thus most countries such as Italy have a low fertility rate, which is 1.2% which is below the replacement rate of 2.1.*

### Question 3e.

Marks	0	1	2	3	4	5	Average
%	3	5	15	25	29	24	3.5

Most students were well versed in a specific country's governmental response to population issues, with many choosing to describe China's One Child policy in detail and others choosing the Baby Bonus schemes in Australia, Italy or another developed country they had studied. They were able to explain why these policies were initiated and what they aimed to achieve.

Most students wrote about China. Some students incorrectly suggested that China's population had decreased, while others made historical and contemporary errors (for example, that Mao introduced the One Child Policy). There appeared to be a belief that the One Child Policy is clearly linked to greater prosperity in China; students need to look at population policies in a broader context to better understand what is happening socially, politically and economically.

A significant number of responses on Australia discussed either immigration or the baby bonus/paid maternity leave. Some students incorrectly described Australia's aged care policy as being the baby bonus.

### Policy response

The more successful answers clearly stated a policy and identified the relevant government or nongovernment organisation that implemented the policy. Students were then able to explain why the policy was implemented or outline relevant details about the policy. China was by far the most common answer here.

The less successful responses did not say what the policy aimed to achieve or discuss the population-related factors that had prompted it. They did not provide the name of a specific policy but wrote about a general non-specific population policy. They also made inaccurate statements about the aim/goal of the policy, particularly the One Child Policy.

### Evaluation

Disappointingly, the 'evaluation' section of the question was not as well answered because of a lack of planning for this part of the question and a lack of understanding about exactly what needed to be evaluated. This section required students to evaluate whether the policy had been successful or not – that is, whether it had brought about population change. The type of change aimed for must therefore have been clearly stated; students usually identified the aim as being to increase or decrease the population size or growth rate. Hence the evaluation had to focus on factors that influence such population changes; for example, birth rate, death rate and/or fertility rate. Too many students overlooked this in favour of outlining changes that were irrelevant to the aforementioned aim of the policy.

The most successful answers provided considerable detail about the successes and failures of the policy and provided evidence, including statistics, to support their assertions. Students were able to make sophisticated evaluative statements about meeting targets and consequent negative and unintended consequences.

Good responses linked the goals and factors outlined in the policy response. Successful students knew their case studies very well and could justify their evaluation using quantifying statistics. Relevant dates, figures, percentages and names were used very effectively in the successful responses. The evaluations showed students' willingness to critically assess even successful policies, with some negative side effects also discussed.

A few students did not state whether the policy had been a success or not, instead presenting a list of the effects of the policy. Many students wrote prolifically on the social impacts of the policy response or its effect on the gender ratios, but failed to address the question in terms of the impact of the policy on overall population change and its success at achieving the desired growth, decline or stability.

Students who used Australia as their country tended to concentrate on the Baby Bonus scheme. Many were able to refer to dates and dollars accurately and evaluate the scheme, but often only superficially. Weaker students were vague about the details of the implementation of the scheme and its costs and amendments.



Some students used a SWOT analysis to evaluate the policy, but these were generally limited responses because they relied on very general statements that were not supported by evidence or quantification.

Too many students did not indicate the time period over which the change had occurred nor the scale of the change.

Following are some examples of successful responses.

*Policy: In 1979 the Chinese Government implemented the One Child Policy to respond to the rapidly increasing Chinese population. 540 million in 1950 to 710 million in 1970. Initially this involved couples only being allowed to have one child, however, exceptions were made to allow for another child to be born if the first was a girl in rural areas.*

*Evaluation: The One Child Policy has been very effective in the short term. The fertility rate has decreased from 2.9 in 1979 to 1.54 today. The growth rate has dropped from 1.7% in 1976 to 0.7% today. Living conditions have also improved. However there is a gender imbalance of more males to females and very spoiled children. The long term sees the population start to decline in 2030. However this policy will create an ageing population. This ageing population will create more demand on aged care facilities.*

*Policy Response: Australia. The Baby Bonus (2002) was an Australian government policy aiming to combat the falling birth rates and an increasing aging population. The Bonus consisted of 13 fortnightly Payments of just over \$300 to assist with the costs of having a new baby.*

*Evaluation: The affordability of the Baby Bonus was extremely questionable. The program cost about \$1.5 billion and it was hard to quantify how many babies it actually resulted in. It was however a fair policy assuring that all those entitled received the benefits e.g. if a mother had twins she was then entitled to two Baby Bonus packages. Despite its fairness, the policy was too expensive to be sustainable and has been replaced.*

*Policy Response: Kenya. The population policy response in Kenya aims to reduce the population growth in order to prevent the spread of HIV/AIDS and ensure economic sustainability. Various international Aid Agencies aim to improve the health and reproductive health of citizens to ensure the health of mothers and children and prevent illegal abortions and keep the population at reasonable levels.*

*Evaluation: Kenya's population policy has been hailed the success story of Africa turning one of the highest birth rates in the world into one of the lowest in the region. Overall health of Kenyans is improving but the population policy needs to keep being implemented as many of the children born in the boom period are now entering the reproductive stages of their lives and contraceptive methods are not accessible to many. The HIV/AIDS situation in the region also calls for the population policy to be implemented further in order to maintain the effectiveness of the strategy.*

## Question 4

### Question 4a.

Marks	0	1	2	3	Average
%	13	16	28	44	2.1

The most successful maps were graphically well presented, adhered to the normal mapping conventions, had clear and accurate keys and titles and contained accurate information. The titles of the maps also matched the content of the maps. Students who obtained full marks had clearly thought about not only what their map was about but how they could best convey the information simply yet clearly.

The less successful responses contained one or more of the following flaws:

- the map did not depict a truly global phenomenon as required, but rather a regional one only
- the title of the map did not match the content of the map. A map entitled 'Distribution of Global Overfishing' should not contain information about annual catches of fish from all regions of the world, thereby taking no account of whether overfishing was taking place in a particular region or not
- a lack of accuracy.

Mapping techniques were often poorly executed and lacking in neatness; in order to convey its information easily a map needs to be simple, concise and precise. The accuracy of the data in the map was sometimes questionable; for example, showing 'desertification' spreading over the whole of India and all of China was simply not correct. The locations of existing deserts and desertification were generally mapped well, although the area around the Atacama Desert was often inaccurate. Responses that referred to global fishing tended to be inaccurate or messy. A few students mapped the areas most likely affected by rising sea levels due to global warming under the title, 'Climate Change' or 'Deforestation', but only showed existing tropical forests.



Students are advised to use contrasting colours in mapping their phenomenon as in some cases the shading and quantification were unclear.

‘Top ten tourist destinations’ and ‘Top ten global fishing areas’ are inappropriate examples of global phenomena.

#### Question 4b.

Marks	0	1	2	Average
%	21	52	27	1.1

This question was generally poorly answered. Many students stated that the phenomenon was global simply because it occurred ‘all over the world’. In many instances, this would be too general in relation to, for example, desertification and global fishing. Responses were often vague and imprecise and in some instances students had difficulty justifying a phenomenon as global because it was in fact regional.

The more successful responses stated why the phenomenon was global by identifying that it occurred on a number of continents or affected many millions of people. They further identified either ways in which the impacts and responses to the global phenomenon were also global and/or made some specific reference to information that had been presented in the map.

Stronger responses gave an explanation of the distribution of the phenomenon by discussing the specific regions around the globe where the phenomenon occurred. The variety and number of regions mentioned demonstrated an understanding of the concept.

Teachers are advised to pay particular attention to the glossary of key terms in the study design, which defines ‘global phenomena’. A number of students incorporated the definition in their response, referring to the requirement of more than a local or national response in their justification.

Weaker responses gave a circular justification, referring to the fact that the phenomenon occurred globally as justification that it was a global phenomenon.

Following are examples of successful responses.

*The phenomenon of desertification is a global phenomenon because it is found on every continent except Antarctica. 850 million are directly affected mainly in Africa and Asia. It is also a global phenomenon because the issue has demanded a global response in terms of international monitoring, research and assistance.*

*Desertification is a global phenomenon as it affects over 30% of the globe, 850m people are directly affected and it requires more than a local/national response such as funding from the World Bank or assistance from the UN.*

#### Question 4c.

Marks	0	1	2	3	Average
%	12	27	39	22	1.7

Most students were able to give a clear explanation of either a natural process or human activity. Many of these included statistics and detailed examples. However, this question was generally poorly done because many students did not ‘evaluate the importance’ of their natural process/human activity or explain how it has affected the global distribution.

The more successful students not only described either a relevant natural process or human activity, they also explained how their chosen natural process or human activity affected, or could affect, the global distribution of the chosen global phenomenon. Very few students addressed the final element of the question, which was to ‘evaluate the importance’ of their chosen natural process or human activity in affecting the distribution of their chosen global phenomenon. An evaluative statement beginning ‘the natural process of ... is extremely/very/somewhat/hardly important ...’ provided a useful focus for answering this question.

A few students did not realise this question was linked to Questions 4a. and 4b. and wrote on a different global phenomenon, thereby missing out on marks. A few students failed to identify a specific natural process (instead sometimes choosing natural features) or a human activity. Some students identified a number of natural processes or human activities, but only one was asked for. Although most students correctly identified either a ‘natural process’ or a ‘human activity’, too many then devoted most of their response to describing the details of the response, which was not



necessary. Some students described the effect of their natural process or human activity at a specific location or case study. This did not gain marks as it did not address how the process or activity had affected 'global distribution'. Students should be instructed on how to deconstruct more complex questions into their various elements.

Following are examples of successful responses.

*The process of global warming is a very important factor in affecting the global distribution of malaria. Currently malaria has a strong spatial association with tropical regions and is mostly prevalent in locations between the Tropic of Capricorn and the Tropic of Cancer but the impact of global warming could cause a rise in temperature in regions not currently at risk of malaria such as southern Europe and northern Australia. This would therefore create an ideal climate for the mosquitoes that carry the disease to breed in regions where the climate is not currently sufficient for them to survive, thereby increasing the areas affected and global distribution.*

*A human activity that has affected the global distribution of HIV/AIDS is education. This is arguably the most important factor affecting the distribution. Areas of lower educational standards and abilities experience higher prevalence of HIV/AIDS as can be seen in sub-Saharan Africa (prevalence >5%). Education is an important factor.*

*Risky sexual activity and/or unprotected sex is a human activity that increases the transmission of the HIV/AIDS virus, thereby increasing the global distribution of HIV/AIDS infected people. Its importance can be gauged by observing the correlation between lack of safe sex practices/education and poor availability of condoms with higher prevalence of HIV/AIDS e.g. in South Africa which has some of the highest HIV/AIDS rates in the world. Safe sex practice and use of condoms will reduce transmission and so the consequent distribution of HIV/AIDS globally.*

#### Question 4d.

Marks	0	1	Average
%	66	34	0.4

This question was very poorly answered by the majority of students. Few students annotated a specific location and distinguished a positive or negative impact as was required. Places were often mapped with little regard for accuracy.

In order to obtain the mark, students needed to do all of the following:

- name the location of the impact
- correctly locate the impact
- state whether the impact was positive/negative
- state whether the impact affected people or the environment.

Annotation requires more than just a one-word label or a star.

#### Question 4e.

Marks	0	1	2	3	Average
%	13	22	37	29	1.8

This question was generally well handled by students. Students were required to describe the impact of a global phenomenon at a specific location, identified in the previous question, as being positive or negative on people or the environment. Students generally answered the question well and were able to give a clear description with reference to a case study. The best answers included specific details of the impact or range of impacts, including quantification, at the particular location identified in Question 4d.

Weaker responses simply named one or two general impacts or did not refer to a specific location or case study and took a general approach in describing the impact.

A few students discussed possible responses to the impact, which was not required in this question.

Following are examples of successful responses.

*Within the Owens Valley the lake had been drained excessively over a thirteen year period causing the top soil to erode causing dust storms. By 1926 the entire Owens Valley had almost no water and the soil remained salty and infertile. The local town of Keeler had been significantly affected by the dust storm, which occurred 20–30 times a year. The town of 5000 decreased to 50 due to the negative impact of dust which carried up to 23 times the number of particles determined as safe by the federal health standard.*

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*The impacts of desertification at the Aral Sea include sea recession of 400m every year, loss of over 20 species of fish, loss of employment ... increased number of people with health issues such as anaemia ... change in micro climate including lower rainfall, the sea shrunk by 2/3 in size and 50% in volume from the 1960's to now.*

## Question 4f.

Marks	0	1	2	3	4	Average
%	11	10	25	26	28	2.5

This question was generally well handled by students. Most students addressed both parts of the question – firstly a description of a strategy employed by a government or nongovernment organisation (NGO) in response to the impact and secondly an evaluation of the effectiveness of this strategy.

The more successful responses named the organisation involved in implementing the strategy and stated whether it was a government or nongovernment one. Successful responses then described the strategy in detail, using quantification and examples. The more closely tied-in the strategy was to the impact in the chosen location, the stronger the responses tended to be. Strategies that were global in nature and could be implemented in any location could be used, but such responses tended to be weaker than those that were more closely focused. For example, responses that discussed the Kyoto Protocol as a strategy to address the negative impact on people of rising seas levels and potential inundation in the Tuvalu Islands tended to be weaker than those that referred to potential evacuation programs of Tuvaluans to New Zealand.

Stronger responses also addressed the second part of the question – the evaluation of the effectiveness of the strategies in managing the impact. An evaluative statement was needed; for example, ‘the ... strategy was very effective/partially effective/ineffective in addressing the impact at ...’ This was then followed by arguments and evidence, usually involving quantification, that supported the evaluation. The strongest responses also qualified their evaluation of the strategy by pointing out the weaknesses in the strategy if they had evaluated it as effective, or its strengths if they had evaluated it as ineffective. This demonstrated a sophisticated understanding of issues that are rarely black and white.

The less successful responses failed to identify the name of the organisation involved and whether it was a government or nongovernment organisation. It was not sufficient merely to state that the strategy was ‘a government one’. These responses also tended to concentrate on the description of the strategy and neglected to evaluate its effectiveness properly. Some responses were formulaic in that the student had rote-learned a response and simply reproduced it.

Following are examples of successful responses.

*The World Bank and the Kazakhstani Government worked together to fund and implement the Northern Aral Sea Project. The main focus of which was to build a 13 kilometre dam between the northern and southern Aral Sea to improve water levels in the north. This strategy has been successful and effective. The dam began construction in 2001 and finished in 2003. In the first few months water levels in the Aral Sea improved by six metres. Between 2004 and 2008 death from respiratory disease in Kazakhstan reduced from 48 to 46 per 100,000. People have also returned to local towns around the Aral Sea and some fishing industry has emerged.*

*Insecticide treated mosquito nets (ITN) have been distributed by the Ugandan Government as part of the ‘National Ugandan Malaria Control Program’. ITN provide a physical barrier against mosquitoes, vectors of malaria, protecting people from infection. This strategy has increased the number of nets in Uganda by a substantial amount. In 2003 .3 m nets had been distributed by 2009 6.7 m nets had been distributed. This strategy has proven to be effective and the number of cases of Malaria has declined from 10.7m in 2007 to 9.8m in 2009. As awareness of the use of ITN increased throughout Uganda this strategy is likely to continue being effective and will be sustainable in the future. The strategy is practical and reliable. However every three years the nets need to be replaced, this could potentially cause issues in the strategies affectivity.*